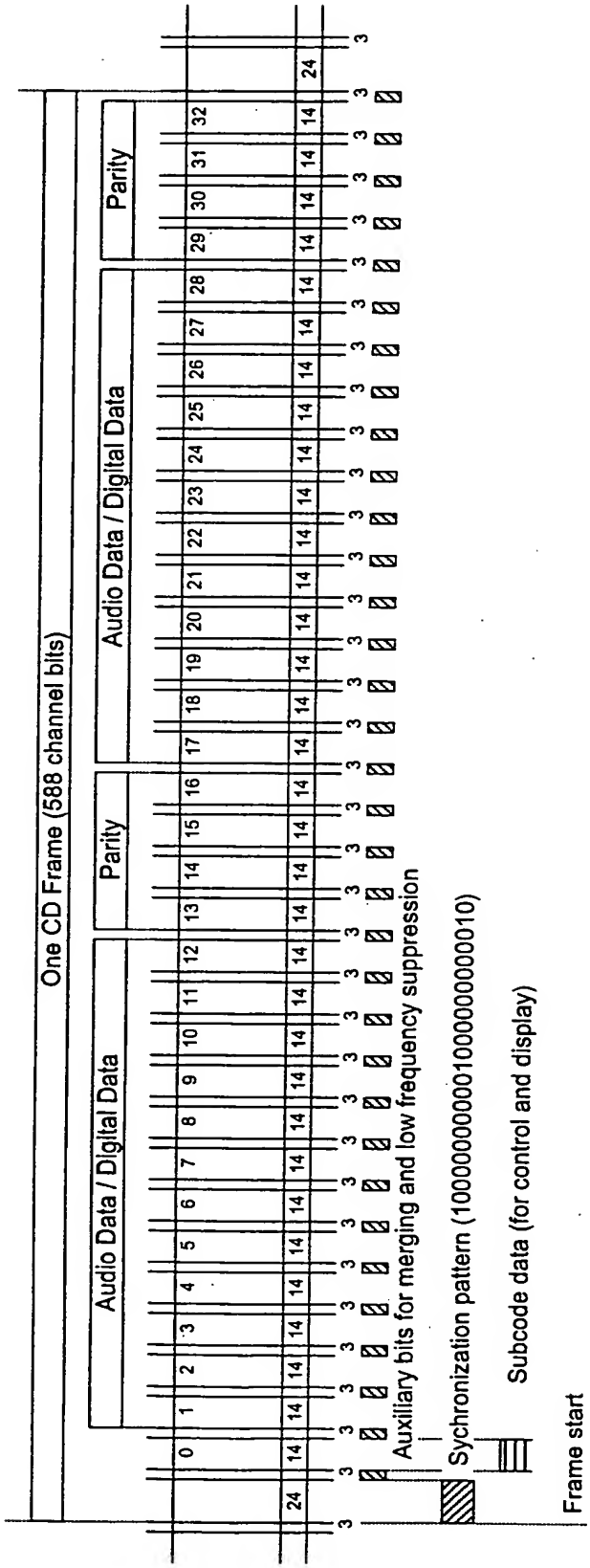
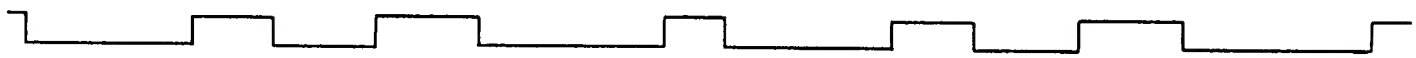
Fig. 1


One CD Frame (588 channel bits)
Audio Data / Digital Data
Parity
Audio Data / Digital Data
Parity
Auxiliary bits for merging and low frequency suppression
Sychronization pattern (10000000000100000000010)
Subcode data (for control and display)
Frame start

70h|3 merging bits|01h|3 merging bits|70h|3 merging bits|01h|3 merging bits

10000000100010000100001000000001001000000010001000010000100000000100



D9h|3 merging bits|7Ah|3 merging bits|D9h|3 merging bits|7Ah|3 merging bits

10000000100010001001000000001000010000000010001000100100000000010000

Fig. 2

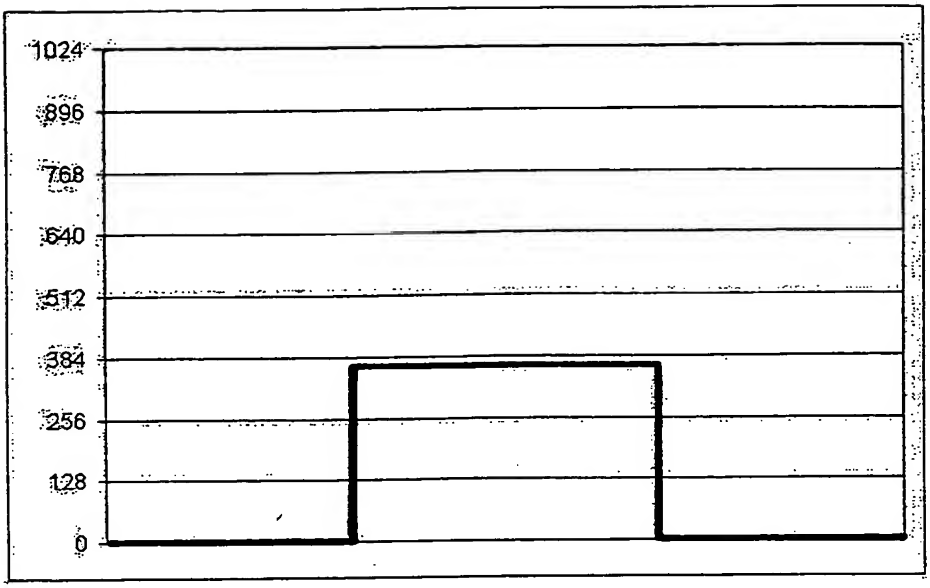

1024
896
768
640
512
384
256
128
0

Fig. 3a

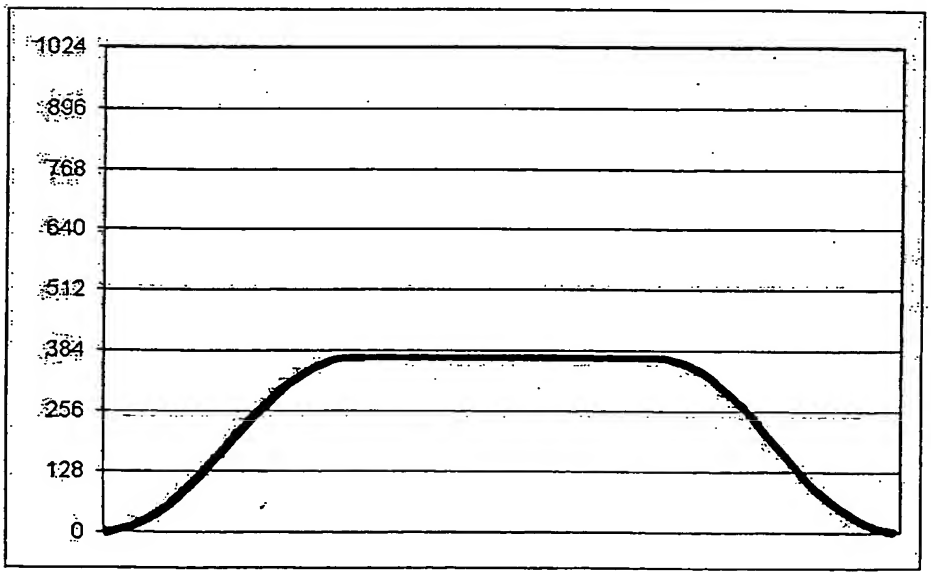

1024
896
768
640
512
384
256
128
0

Fig. 3b

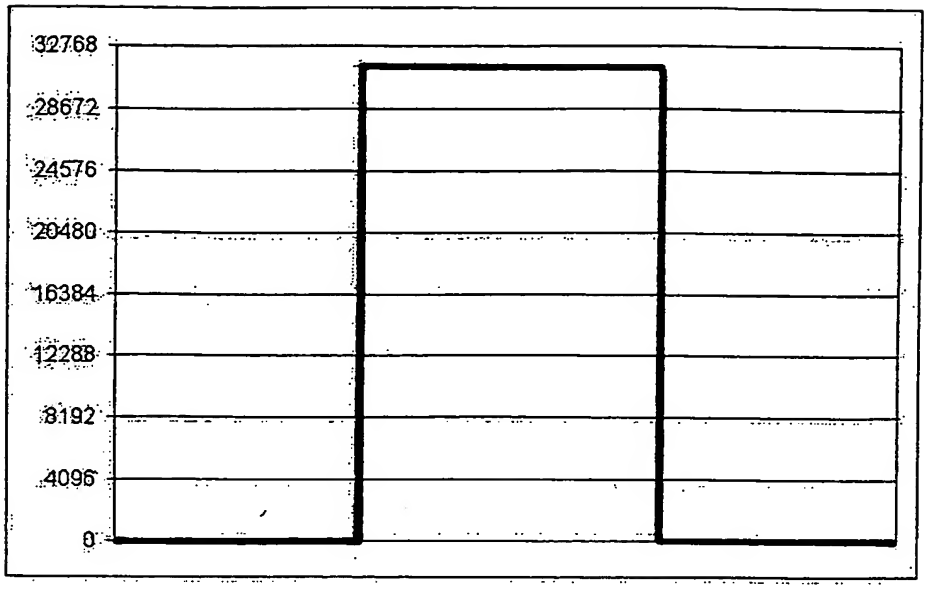

32768
28672
24576
20480
16384
12288
8192
4096
0

Fig. 4a

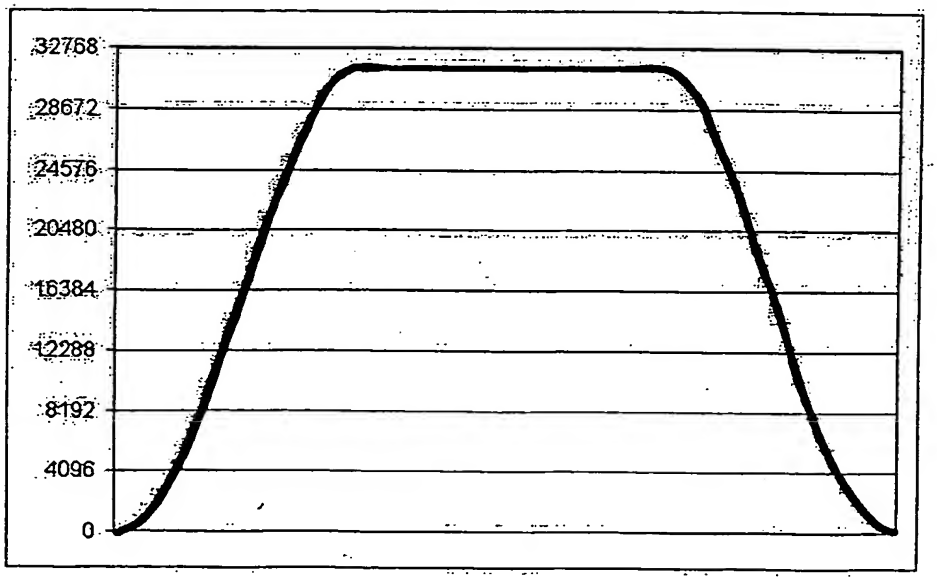

32768
28672
24576
20480
16384
12288
8192
4096
0

Fig. 4b

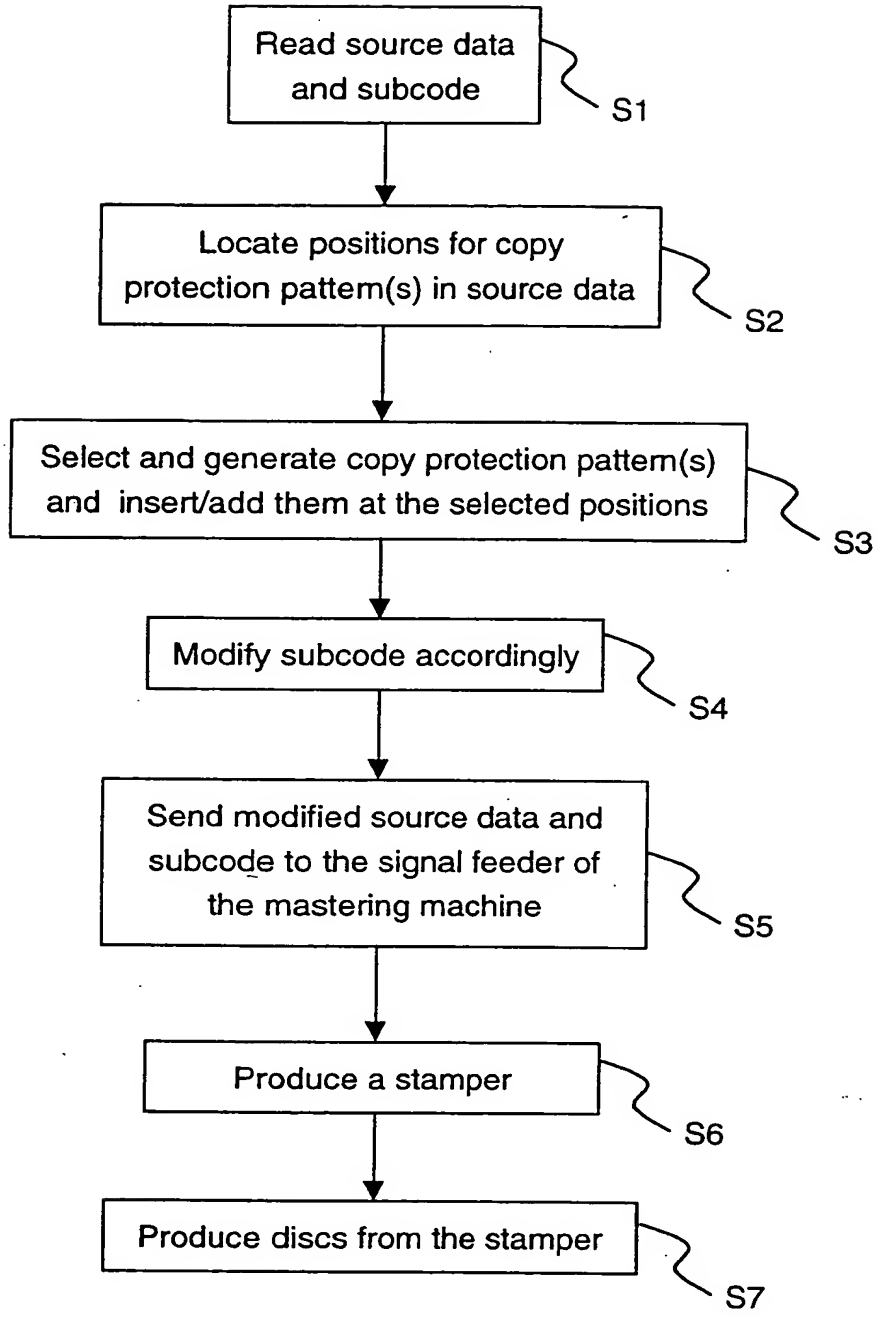

Read source data and subcode
S1
Locate positions for copy protection pattern(s) in source data
S2
Select and generate copy protection pattern(s) and insert/add them at the selected positions
S3
Modify subcode accordingly
S4
Send modified source data and subcode to the signal feeder of the mastering machine
S5
Produce a stamper
S6
Produce discs from the stamper
S7

Fig. 5

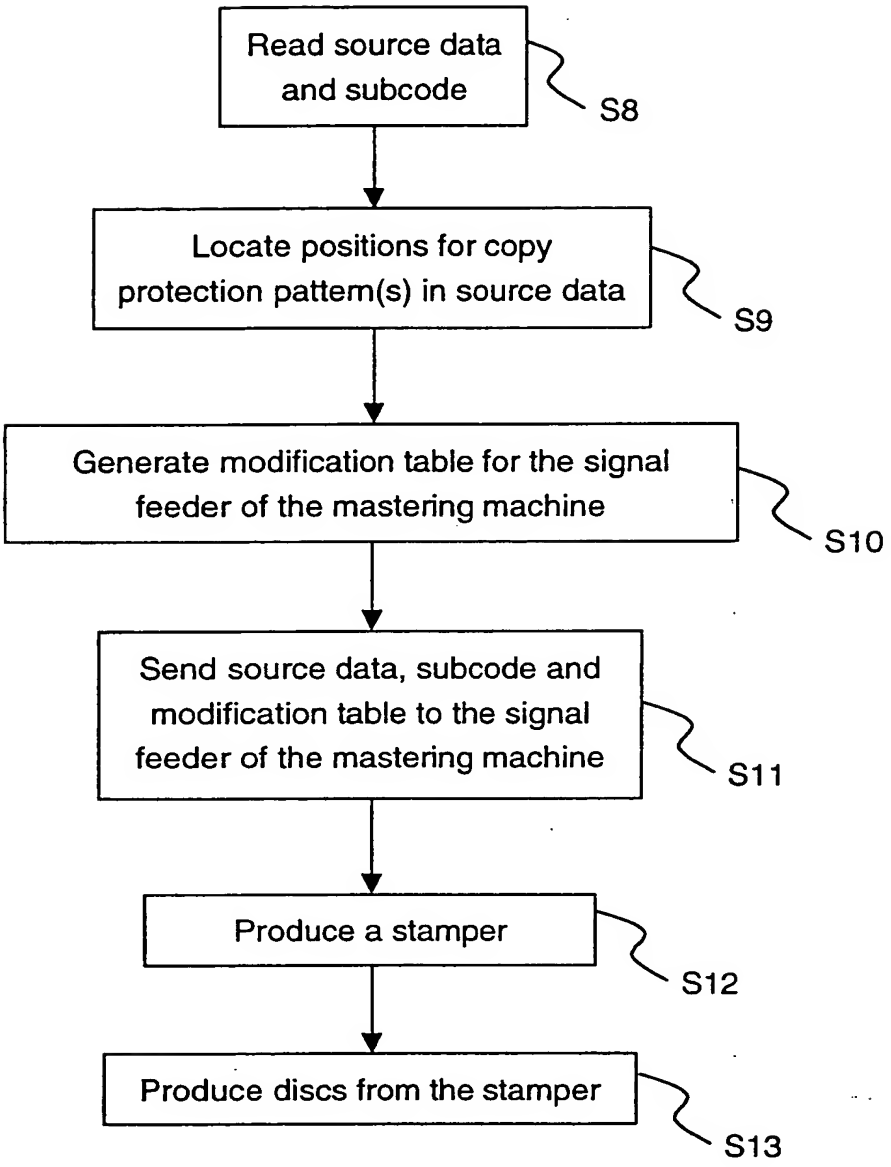

Read source data and subcode
S8
Locate positions for copy protection pattern(s) in source data
S9
Generate modification table for the signal feeder of the mastering machine
S10
Send source data, subcode and modification table to the signal feeder of the mastering machine
S11
Produce a stamper
S12
Produce discs from the stamper
S13

Fig. 6

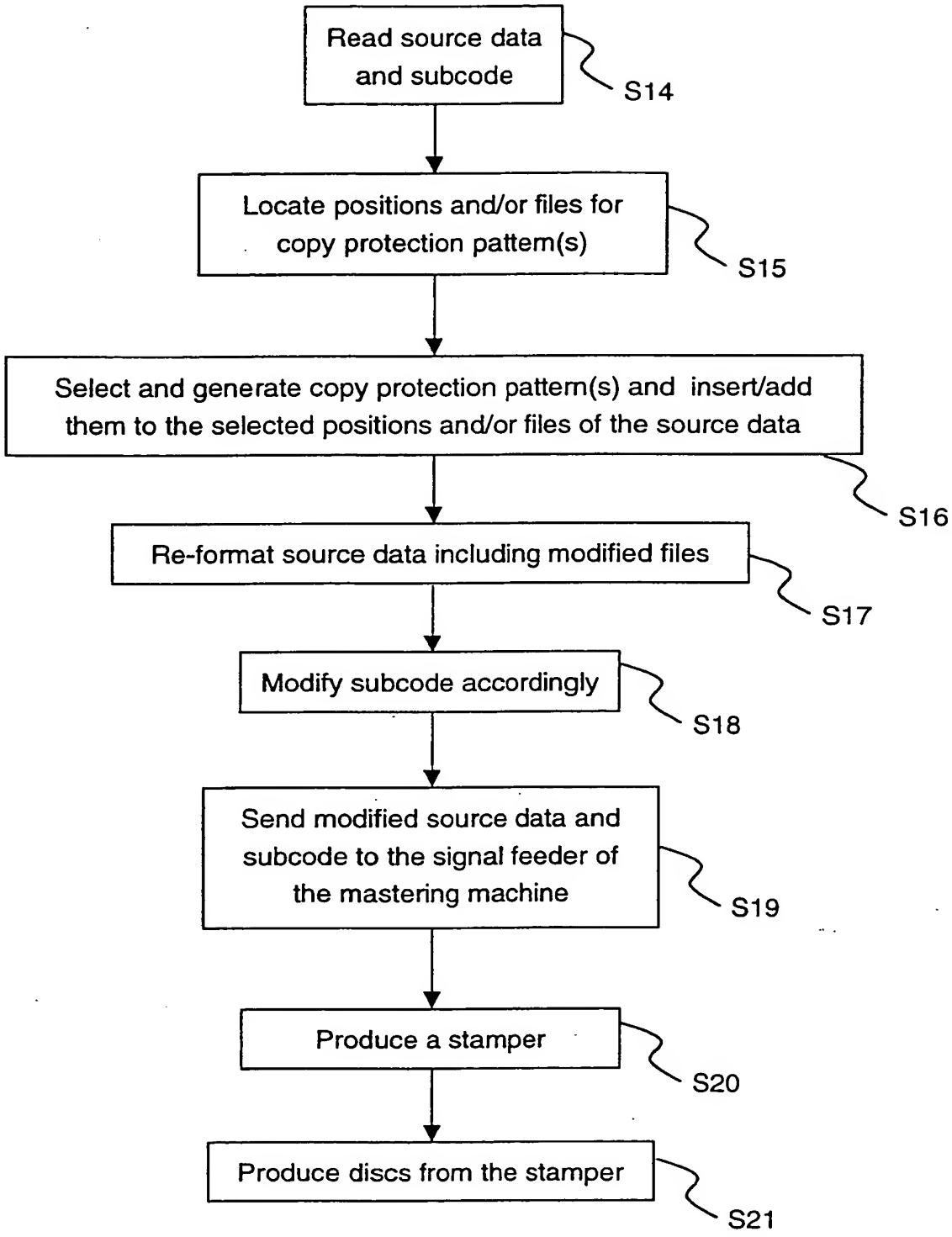

Read source data and subcode
S14
Locate positions and/or files for copy protection pattern(s)
S15
Select and generate copy protection pattern(s) and insert/add them to the selected positions and/or files of the source data
S16
Re-format source data including modified files
S17
Modify subcode accordingly
S18
Send modified source data and subcode to the signal feeder of the mastering machine
S19
Produce a stamper
S20
Produce discs from the stamper
S21

Fig. 7

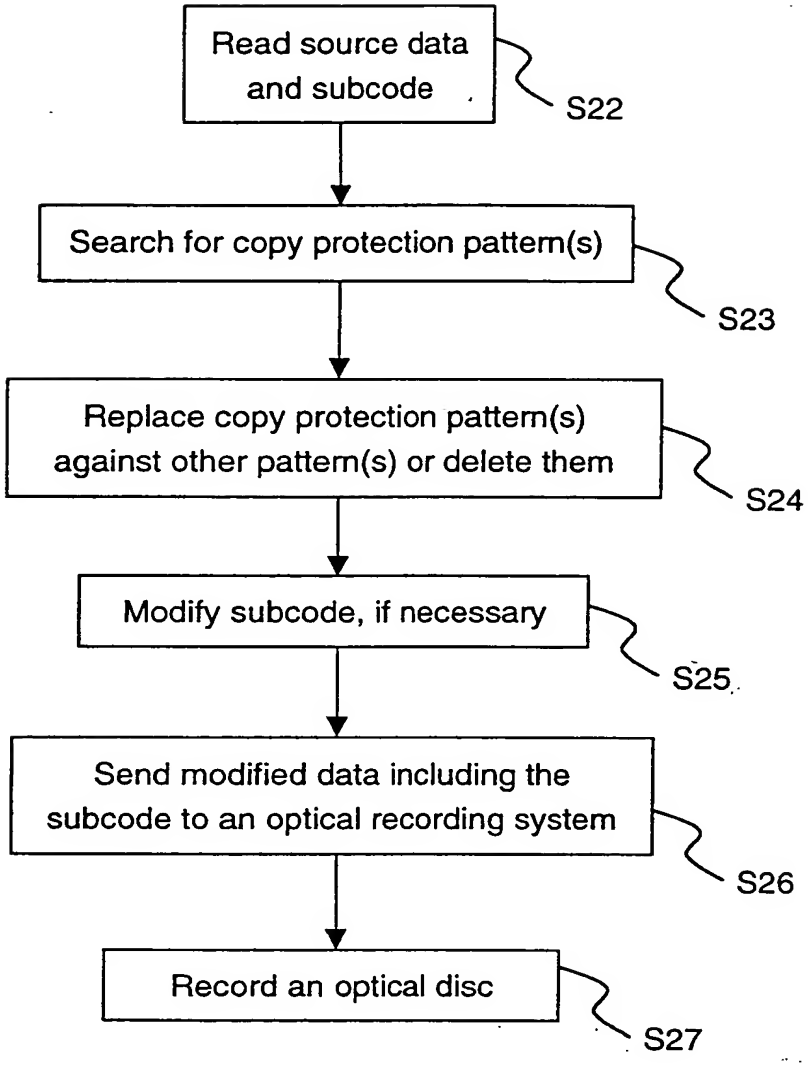

Read source data and subcode
S22
Search for copy protection pattern(s)
S23
Replace copy protection pattern(s) against other pattern(s) or delete them
S24
Modify subcode, if necessary
S25
Send modified data including the subcode to an optical recording system
S26
Record an optical disc
S27

Fig. 8

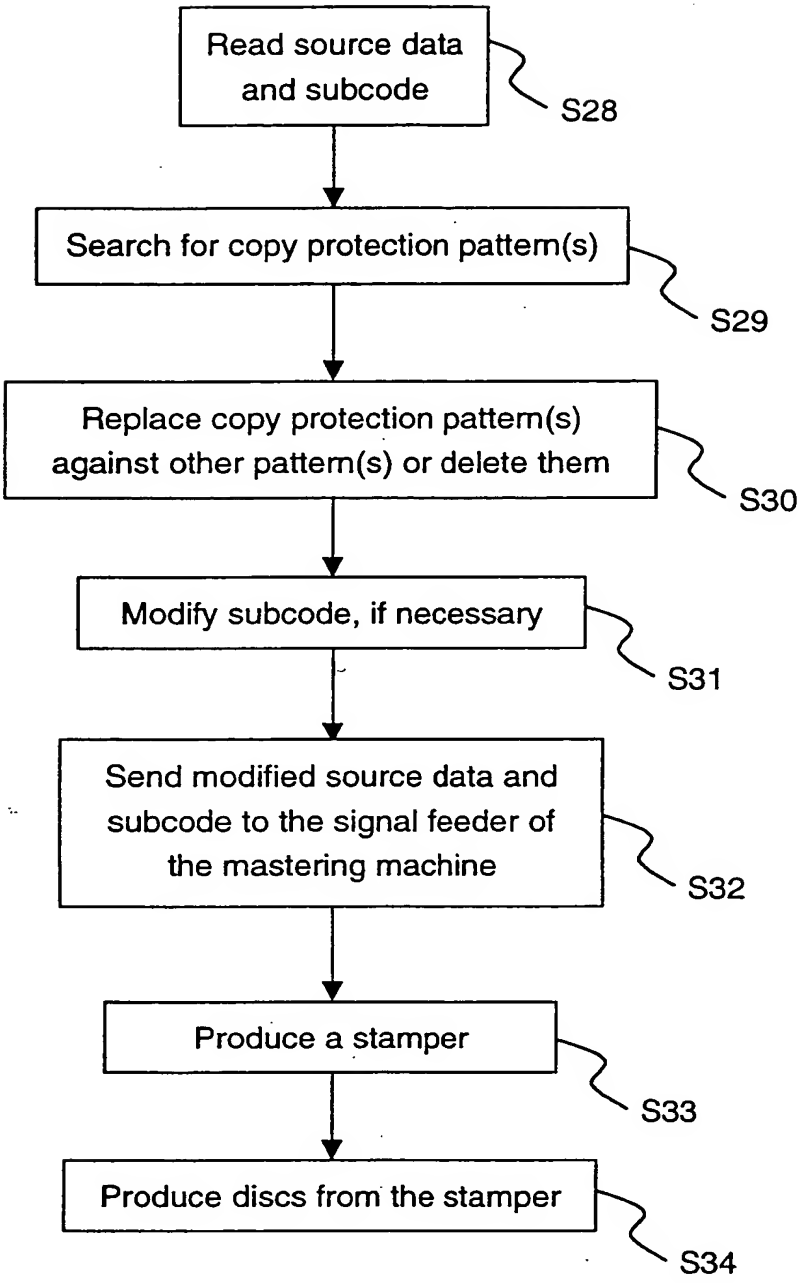

Read source data and subcode
S28
Search for copy protection pattern(s)
S29
Replace copy protection pattern(s) against other pattern(s) or delete them
S30
Modify subcode, if necessary
S31
Send modified source data and subcode to the signal feeder of the mastering machine
S32
Produce a stamper
S33
Produce discs from the stamper
S34

Fig. 9

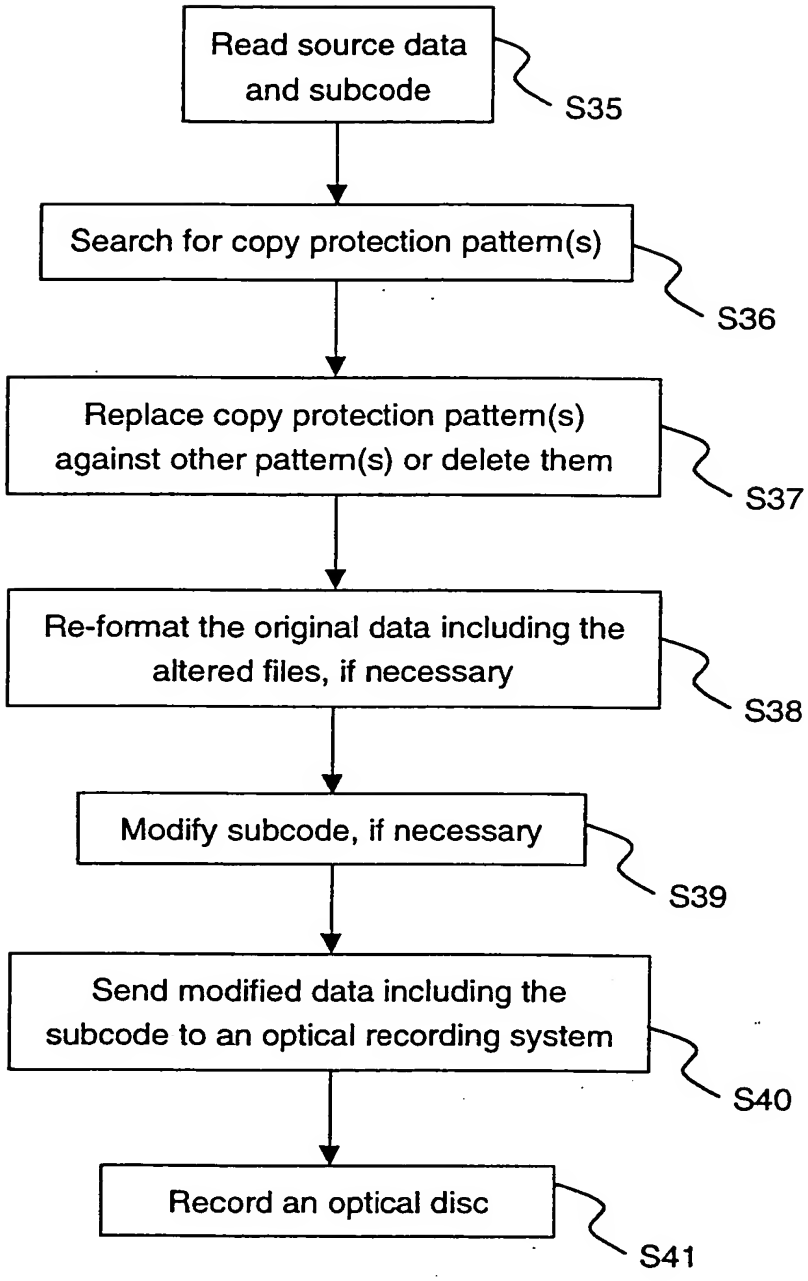

Read source data and subcode
S35
Search for copy protection pattern(s)
S36
Replace copy protection pattern(s) against other pattern(s) or delete them
S37
Re-format the original data including the altered files, if necessary
S38
Modify subcode, if necessary
S39
Send modified data including the subcode to an optical recording system
S40
Record an optical disc
S41

Fig. 10

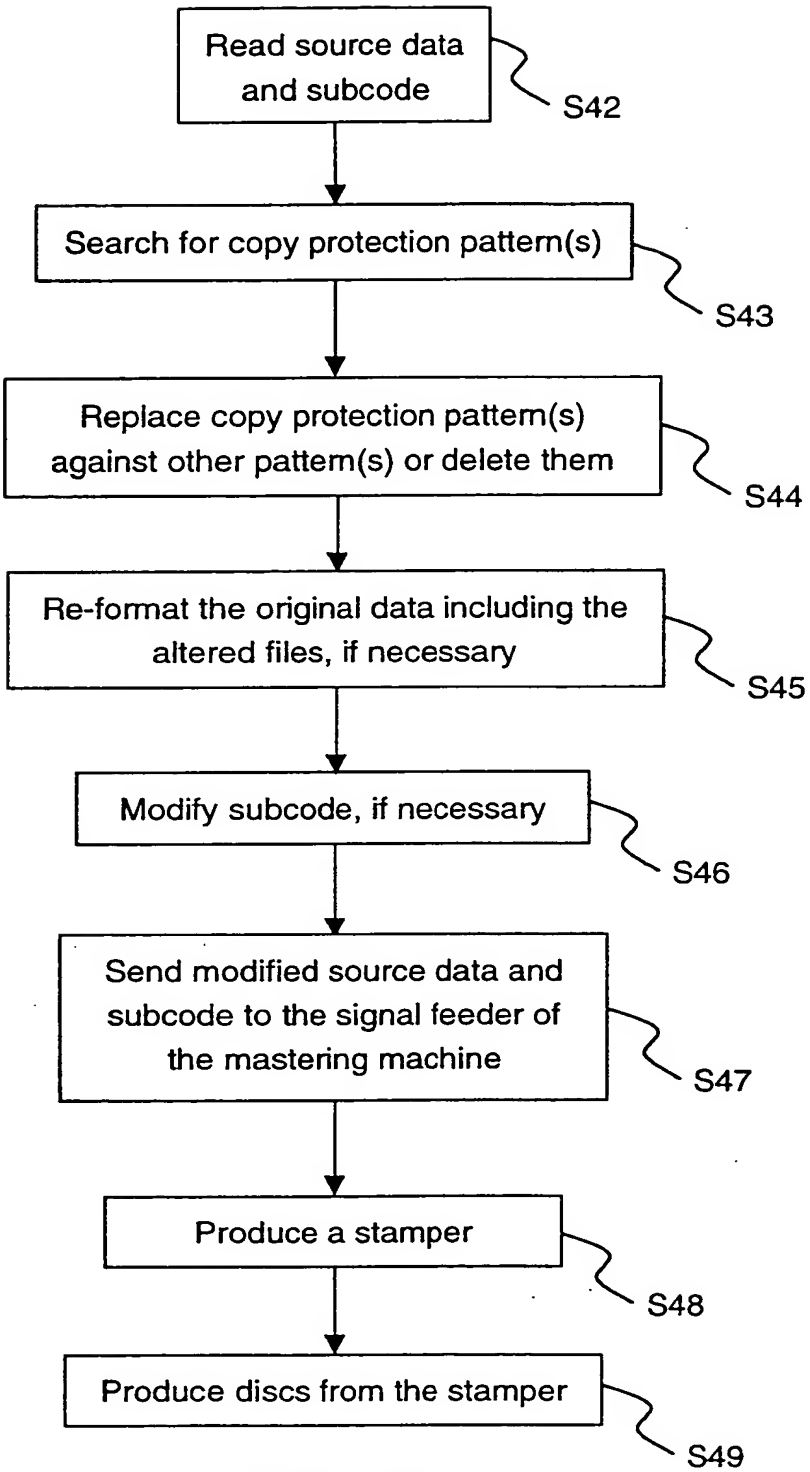

Read source data and subcode
S42
Search for copy protection pattern(s)
S43
Replace copy protection pattern(s) against other pattern(s) or delete them
S44
Re-format the original data including the altered files, if necessary
S45
Modify subcode, if necessary
S46
Send modified source data and subcode to the signal feeder of the mastering machine
S47
Produce a stamper
S48
Produce discs from the stamper
S49

Fig. 11

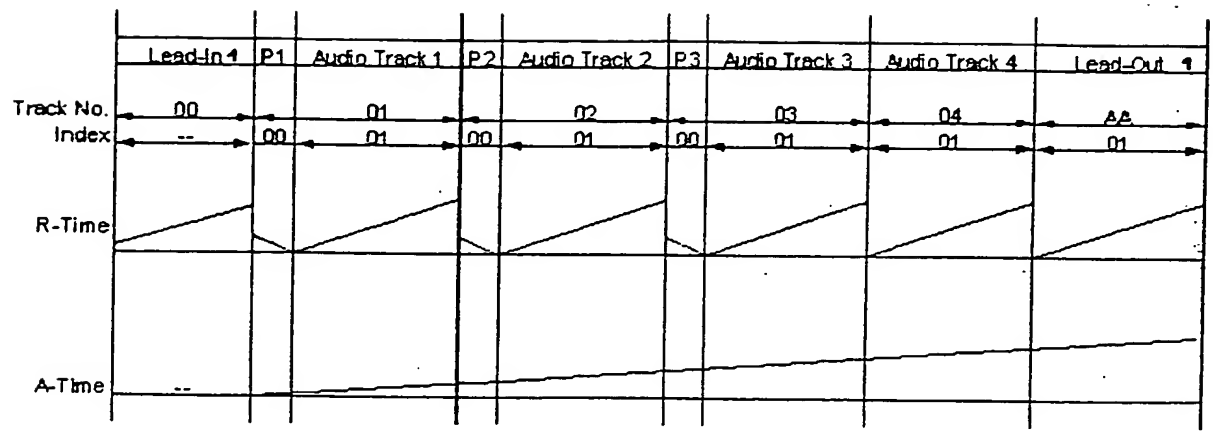


Fig. 12a

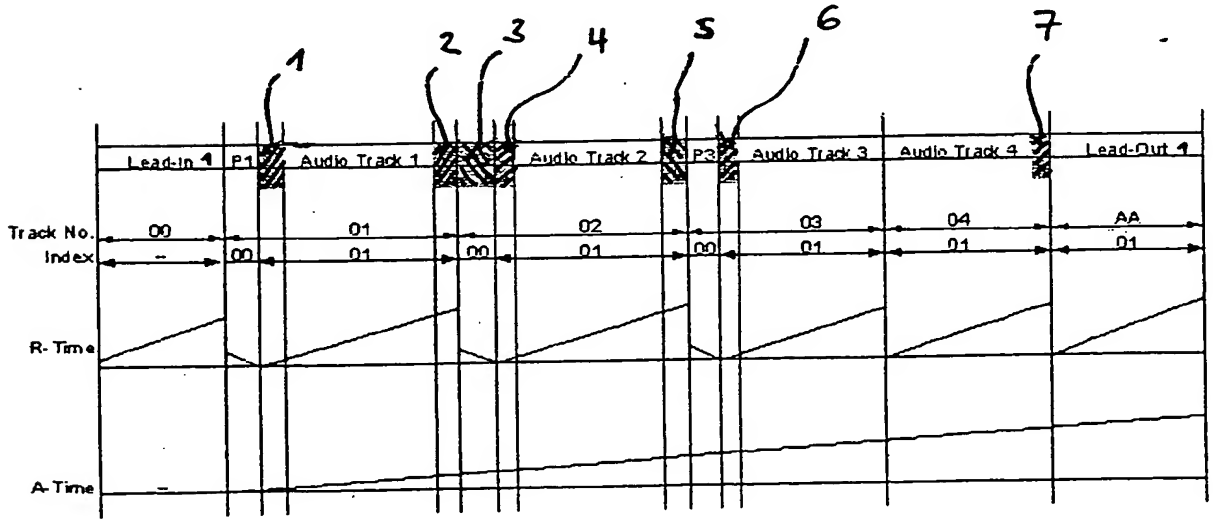


Fig. 12b

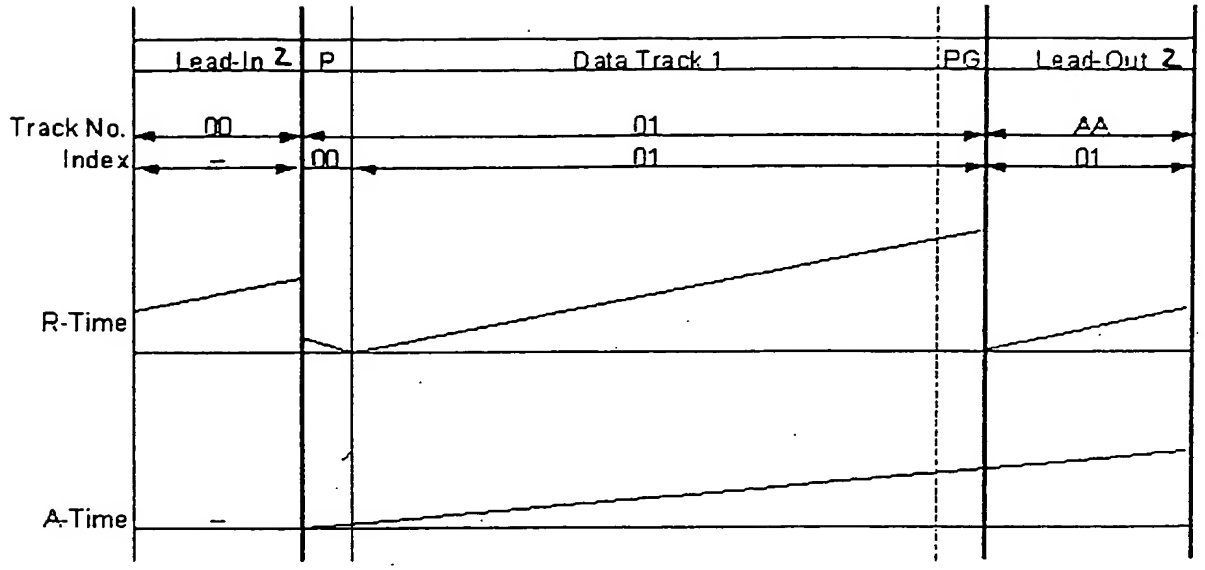


Fig. 13a

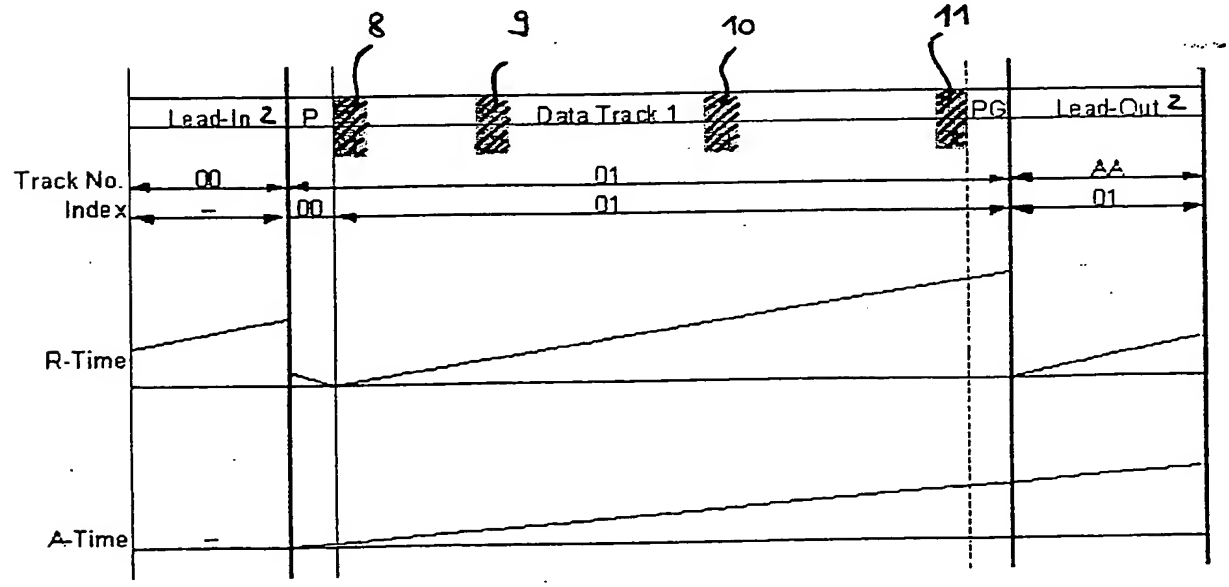


Fig. 13b